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TOBACCO PRODUCTION and MARKETING in

Southern Rhodesia, Northern Rhodesia, and Nyasaland

Foreign Agricultural Service UNITED STATES DEPARTMENT OF AGRICULTURE

FOREWORD

This report is intended as a reference on tobacco production and marketing in each of the Rhodesias and Nyasaland, as the three separate from their former Federation. On December 31, 1963, the Federation of the Rhodesias and Nyasaland was dissolved, with Nyasaland planning to become Malawi, and Northern Rhodesia, Zambia or Zambesi. Southern Rhodesia will not take a new name.

This half-million-square-mile area of southeast Africa is of great significance to the U.S. tobacco industry. Southern Rhodesia is second largest producer-exporter of flue-cured in the Free World, and it produces approximately 50 percent of the tobacco output of the entire African Continent.

The study is based primarily on material gathered by the author in an on-the-spot survey of the area.

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CONTENTS

TOBACCO PRODUCTION and MARKETING in SOUTHERN RHODESIA, NORTHERN RHODESIA, and NYASALAND

By Albert B. Davis

INTRODUCTION

The former Federation of Rhodesia and Nyasaland has in recent years ranked next to the United States in exports of flue-cured tobacco to world markets. In 1962, U.S. exports totaled 375.4 million pounds, those from the Federation, 189.8 million.

The Federation, which was established in 1953, embracing Northern and Southern Rhodesias and Nyasaland, has been for some years an increasingly important factor in world tobacco production and exports. In 1962, total Federation shipments of unmanufactured tobacco were approximately 216 million pounds, up nearly 100 million from the 1950-54 average level of around 117 million. In 1962, the Federation's exports represented 24 percent of total world flue-cured exports, compared with only 16 percent in 1950-54. In addition, the Federation's exports represented a large share of all Africa's, with the latter totaling only 251 million pounds in 1962.

To the three entities of the former Federation, situated in southeast Africa, with a population of around $9\frac{1}{2}$ million (of whom over 9 million are native Africans) tobacco is a crop of vital importance. As a source of foreign exchange, tobacco exports rank second, following those of copper, and surpass all other agricultural exports combined. In addition, an estimated 230,000 persons are engaged in tobacco production.

By far the most important of the three areas in tobacco production is Southern Rhodesia, for which preliminary 1961-62 figures indicate output of almost 245 million pounds. (This compares with a Federation total of around 277 million pounds.) Southern Rhodesian production is now about 53 percent of the total for the entire African continent, as well, compared with an average of 31 percent for 1948-49 to 1952-53. Total production for Africa has risen only about one-half during this period, while Southern Rhodesia's has increased about $2\frac{1}{2}$ times.

First really large increases in the production of flue-cured tobacco in the Rhodesias became apparent after World War II with initiation of the first purchase arrangement with United Kingdom manufacturers, through the British Board of Trade. This first agreement, in 1948, provided for United Kingdom manufacturers to purchase approximately 46 million pounds. Following World War II, United Kingdom limited the percentage of imports which could be imported from non-Commonwealth areas. Arrangements in 1962 provided for the purchase of about 100 million pounds of flue-cured tobacco. In July 1962, the Tobacco Advisory Committee in the United Kingdom gave estimates of needs for Rhodesian tobacco for the next 3 years (1963 through 1965 crops) at 100 million to 105 million pounds (auction sales weight). "The Commonwealth Duty Preference" equivalent to 21.6 cents per pound, which is granted to Commonwealth producers by the United Kingdom, has been another important factor in tobacco expansion in Rhodesia.

Table 1.--FEDERATION OF THE RHODESIAS AND NYASALAND; Total acreage and production of all types of tobacco, average 1950-54[1] annual 1954-63

Year	Acreage harvested	Production
	1,000 acres	1,000 pounds
Average:		
1950-54	299	145,952
Annual:		
1954	306	162,279
1955	226	153,179
1956	311	209,717
1957	323	180,580
1958	378	193,764
1959	392	231,579
1960	335	257,016
1961[1]	332	263,424
1962[1]	352	276,641
1963[2]	390	248,349

[1] Combined for the three areas.
[2] Preliminary.

Table 2.--Increase in tobacco production, Southern Rhodesia compared with all African, averages 1948-49 to 1952-53 and 1953-54 to 1957-58, annual 1958-59 to 1961-62

Year[1]	African continent	Southern Rhodesia	Production as percent of all African
	1,000 pounds	1,000 pounds	Percent
Average:			
1948-49 to 1952-53	308,644	97,002	31
1953-54 to 1957-58	396,828	138,890	35
Annual:			
1958-59	440,920	180,777	41
1959-60	485,012	209,437	43
1960-61	462,966	233,688	50
1961-62[2]	462,966	244,711	53

[1] Crop year. [2] Preliminary.

Source: United Nations Economic and Social Council, Economic Commission for Africa, Fifth Session, The Food and Agriculture Situation in Africa.

SOUTHERN RHODESIA

Flue-Cured

For Southern Rhodesia, flue-cured tobacco production and exports are of vital importance. Recently, output has exceeded 200 million pounds, of which about 95 percent is exported (bringing total exports to more than half those of the United States).

Production practices

Production of flue-cured tobacco in Southern Rhodesia is a large-scale operation. The tobacco is for the most part produced on large farms under individual ownership of Europeans (the local term for whites). A typical tobacco farm has a total area of about 1,000 acres. On the average, 70 to 90 acres of tobacco are grown per farm each year. This is about twice the average (of 35 acres per farm) for Canada and approximately 25 times the average allotment (of 3 acres per grower) for the United States. Labor is plentiful and cheap compared with labor costs in Canada and the United States.

Rotations.--Several different crops are grown in Southern Rhodesian tobacco fields, in a crop rotation system. Grass is one of the most important, with Rhodes grass and Love grass two of the main types used. Choices of grasses for use in tobacco rotation are limited, since a number tend to build up the eel worm (nematode) population. Love grass (Ermelo strain) and Katambora Rhodes grass are recommended; Giant Rhodes grass is not.

A new grass, "Sabi," has been introduced recently and is being tried on a few farms. There are some indications that it may perform well in these rotations.

Grasses occupy the tobacco land for 2 to 4 years; after this they are plowed under, with tobacco plantings following. The plowing operation is difficult and expensive because of the heavy grass growth. After being plowed, the fields are sometimes left fallow for a time; this aids in the control of nematodes. One of the main factors controlling the amount of tobacco grown each year is the large amount of land tied up in the rotation. Approximately 300 acres might be in rotation grasses on a typical Rhodesian tobacco farm, at one time.

Ridge planting.--Contour cultivation is practiced on a large proportion of the farms. Tobacco, maize (corn), and some other row crops are planted on ridges made on the contour. Ridges are a "must" because of the wet seasons. These are 42 to 48 inches apart, with a spacing of 24 inches between plants in the row. Corn is a very important alternative crop and is a basic part of the worker's diet. It is grown for food, feed, and commercial sale. Planting is often done by hand, as planting on the ridges with machines is difficult. An estimated 90 percent of the corn grown commercially is the hybrid type, and high yields are not uncommon.

Southern Rhodesia: Flue-cured tobacco (Kutsaga 51) after topping.

Transplanting.--Tobacco is transplanted in October, November, and December. That transplanted in October and November requires that ample water be used, while later transplantings are usually made after the rainy season has started. Many authorities recommend early transplanting, as tobacco so treated matures earlier and is of better quality. Some growers with large acreages transplant over a considerable period of time, because this enables them to utilize more efficiently labor for both the transplanting and the harvesting operations. Plants are transplanted by hand because labor is plentiful and because conventional tobacco-transplanting machines do not work well on ridges.

Use of fertilizers.--Rhodesian growers use considerable fertilizer in tobacco production, even though some of their soils have fairly high inherent fertility. As a rule, fertilizers are placed by hand on or in the ridges. However, machines have been developed to place a band of fertilizer along the top of the ridge on either side of the plant location. Some growers, when transplanting, place a small amount of fertilizer at each planting hole.

When transplanting plants early, or during the dry season (October-November), some of the growers apply the nitrogen fertilizer in the planting water. (This method saves one operation.) The correct amount is added to the planting water. The amount of water varies between 1 and 2 pints per plant, depending upon conditions.

Fertilizers for flue-cured tobacco in Southern Rhodesia are estimated to account for about 13 percent of production costs. The Tobacco Research Board publishes carefully prepared fertilizer recommendations, based upon research.

In general the sandveld soils and the sandy loam soils require greater proportions of nitrogen, the clay and clay loam soils more phosphate. Some of the soils are said to need 20 pounds of magnesia (MgO) as an insurance against "sand drown". The element is usually supplied by 45 pounds of magnesite, or 100 pounds of dolomite, per acre.

Diseases and pests.--Soil fumigants now used on about 50 percent of the acreage are usually applied below the plant stations. They are placed in this position after soil ridging and at least 14 days before transplanting. Sometimes chemicals for control of nematodes are applied in the planting water.

Diseases and pests cause considerable trouble and result in heavy losses if growers do not follow good control programs. Nematodes take their toll and some of the diseases which cause losses are: white mold (mildew), wildfire, bushy-top rosette disease and altenaria. Costs for combating pests and diseases are surprisingly high, averaging about $30 per acre. When "white mold" breaks out (and four or five applications are often required to control the disease) the cost of this treatment alone is about $8 per acre.

A disease, "Necrotic Virus Y," associated with potatoes and commonly known as tobacco vein-browning virus, has recently been detected for the first time on tobacco in Southern Rhodesia.[1] It is generally regarded as a strain of the common potato virus Y, which can also infect tobacco, but causes only vein clearing, followed by banding. This disease produces a severe necrosis of the mid-rib, petioles and stems of most varieties of tobacco, especially Virginia and Burley. The leaves of infected plants tend to dry up, and become a total loss. Both the common and potato viruses are transmitted by aphids. The necrotic virus, however, is not very long-lived or persistent in the aphid. This factor may be important in limiting the distance which the disease can be spread by infected aphids. The government has decided to issue regulations to prevent the spread of this virus.

Cultivation.--Since the tobacco is grown on ridges, cultivation is largely performed by hand. Considerable hand labor is used also in removing the "suckers" from the tobacco plants and in the topping operation. A special type of oil is used by some growers in controlling suckers on tobacco. Maleic hydrazide is not approved by the Rhodesian Tobacco Growers' Association.

[1] Source: The Rhodesian Herald, June 28, 1963.

Harvesting.--Harvesting is a hand operation. Many types of relatively small and simple devices have been developed to aid in tying or stringing tobacco leaves in the field. Some of these "gadgets" are carried by the operator between rows, while others have a single small wheel and are pushed between rows. As mentioned elsewhere, the "ridges" are usually made on the contour, and, since it rains frequently during the harvest season, spaces or furrows between the ridges are often wet or muddy. This increases the difficulty of harvesting, and it is often necessary to carry the primed leaves to ends of rows or to grassy areas. Tobacco sleds or "boats" are not used in Rhodesia, for hauling the primed leaves to curing barns, as in Canada and the United States. Instead, these growers use wagons or trailers with flat beds, or with racks, for holding leaves that have been "strung" in the fields.

Curing.--Flue-curing is a farm operation, performed by the growers before marketing the tobacco.

Most of the barns used in Rhodesia for flue-curing tobacco are made of brick, made in many instances right on the farm. Barns used are larger than those in Canada or the United States, and are built in units of four or five.

Hand labor alone is used for filling the barns or kilns with primed (green) tobacco. This differs from the method used in Canada where the tobacco (tied on sticks) moves up an incline-plane type of elevator into the barn to a person or persons who place the sticks on poles.

In past, the main fuel for curing has been wood. Handling of wood and stoking of fires is done largely by African labor. On many farms, supplies of wood are inadequate, and some growers are changing to use of oil-type heating units. Estimates by growers using oil indicate that fuel costs are $28 to $30 for each barn of tobacco cured. The writer observed a new-type coal (stoker) heating unit on one farm for which curing costs were estimated at about $23 per barn of tobacco cured.

Some growers stated that they expect to convert to oil or coal when their present wood supply is gone, rather than to plant tree seedlings and wait 10 years for the trees to grow. In addition, the use of wood involves labor cost for cutting trees and hauling wood, plus the further labor input required for firing with use of wood, compared with the less expensive labor required when curing with oil or coal stoker units. Since much of the labor is unskilled, it appears more difficult to secure uniformity, and quality curing, than in the United States and in Canada.

Southern Rhodesia: Flue-curing barns are built in blocks of four, six, eight, or more. Fuel may be wood, coal, paraffin

Production costs and profits

Total growing and curing costs were reported by the growers to run from about $280 to $360 per acre. More conservative authorities estimate the average cost about $250 to $330 per acre. An official of the Rhodesian Tobacco Association, in a speech given in Rhodesia in March 1963, stated that this year's production cost might be as high as 29 cents per pound for cured leaf. If one uses these figures as a guide for making an estimate the average grower might have net returns of $100 to $120 per acre. With such net returns per acre, an average tobacco producer might have a net income of $7,000 to $8,500 from the tobacco enterprise. This year (1962-63 crop) the average yield dropped, tending to reduce net returns. However, prices were good. On some farms, profits from tobacco have been used to start or expand livestock and other enterprises. Clearing and breaking of land for tobacco has also opened the way for commercial corn production and for other crops.

Tobacco Research

Tobacco research in Southern Rhodesia has been concerned mainly with flue-cured. The Kutsaga Research Station near Salisbury is the main one, although tobacco studies are carried on also at the Trelawney Station, about 65 miles northwest of Salisbury, and at the Broken Hill Station located about 85 miles north of Lusaka in Northern Rhodesia. Research on burley type tobacco is being expanded.

Since 1955, tobacco research has been operated on a Federal basis and this is administered by a Tobacco Research Board operating in both Southern and Northern Rhodesia. (Separate tobacco research has been carried on in Nyasaland, as well.) The former has been financed by the Rhodesian Tobacco Association (RTA) and the government. RTA finances about 75 percent of the expenditure from its levy on tobacco sales, and the balance of the budget comes from government grants. The current 5-year research program is estimated to cost a total of $2,800,000.

Marketing

Growers of flue-cured tobacco in Southern Rhodesia pack it in bales, weighing on the average 180 pounds, for transport and sale. The bales are wrapped in treated paper and have an outer covering of hessian (burlap). The tobacco is pressed and baled on the farms. Grading is handled on the farms or in commercial grading establishments.

Tobacco may be hauled to the Salisbury Auction Market by the farmers' own truck, but some is also trucked by commercial haulers or by "railroad lorries," overland trucks operated in conjunction with the railroad. Some growers, who live near the railroad, ship their tobacco by rail.

Compulsory auctions as a marketing device are almost 30 years old, having been introduced in Southern Rhodesia in 1936, and in Nyasaland in 1938.

All Southern Rhodesian flue-cured tobacco is sold in Salisbury. There the tobacco is auctioned on one of the three auction floors, which are located on the outskirts of the city. The auctions are patterned after those in the United States. (Tobacco grown in the western and central areas of Northern Rhodesia is also marketed on the Salisbury auctions. Tobacco from the Eastern Province of Northern Rhodesia is marketed on the auctions in Limbe, Nyasaland.)[2]

Most of Rhodesias tobacco goes into export channels. The flue-cured tobacco sold on the Salisbury floors and destined for export goes by railroad to the seaport of Beira, Mozambique, where it is transferred to ocean-going ships.

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[2]Burley tobacco was sold by private sale through the 1962-63 crop. Beginning with the 1963-64 crop, Southern Rhodesia's burley is to be sold over the auctions in Salisbury.

Turkish tobacco grown in Southern Rhodesia is sold by private sale.

Table 3.--RHODESIA AND NYASALAND: Average growers' prices[1] of tobacco by types, 1961-63

Area and type	Average price per pound		
	1961	1962	1963
Flue-cured:	U.S. cents	U.S. cents	U.S. cents
South-Western Area--Southern Rhodesia and northwestern Northern Rhodesia at Salisbury auctions	39	41	49
Northeastern Northern Rhodesia and Nyasaland at Limbe auctions	32	39	40
Fire-cured:			
Nyasaland - Southern Division	18	24	27
Nyasaland - Northern Division	24	23	20
Sun-cured:			
Northern Rhodesia and Nyasaland	17	25	26
Burley:			
Southern Rhodesia and northwestern Northern Rhodesia	--	37	30
Northern Rhodesia and Nyasaland	29	38	34
Northern Rhodesia[3]	28	35	([2])
Turkish:			
Northern Rhodesia[3]	26	38	([2])

[1] Converted from Rhodesian pence to nearest U.S. cents.
[2] Data not currently available.
[3] African growers.

On July 1, 1960, new railway rates for the transport of tobacco were introduced. A breakdown of total transport costs per pound for tobacco exported from Salisbury in 1961 are given below:

Destination	Equiv. U.S. cents
Railage Salisbury/Beira	0.8
Beira port changes	.3
Ocean freight:	
United Kingdom	2.3
Australia	4.8
Germany	2.3
Japan	3.3

Tobacco handling and storage facilities in Beira have recently been improved and expanded. Some of the new shed space has improved ventilation and lighting. Tobacco exporters may keep limited stock at the storage facilities in Beira so that it is available to fill orders when immediate shipping is desired.

Table 4.--FLUE-CURED: Acreage, yield, sales, and price, Salisbury auction, by area of tobacco origin, average 1937-41, annual 1949-63[1]

Sale year	Growers	Acreage	Total sales (including direct sales)	Average yield per acre	Auction sales, average price per pound
					Equiv. U.S.
Southern Rhodesia:	Number	Acres	Pounds	Pounds	cents
Average:					
1937-41.....	576	53,142	27,101,507	513	13.8
Annual:					
1949.....	1,778	125,968	81,722,214	649	37.2
1950.....	2,100	152,717	104,262,802	683	43.9
1951.....	2,349	168,000	89,473,761	533	40.3
1952.....	2,546	189,151	96,577,695	511	49.9
1953.....	2,460	177,091	105,151,836	594	46.3
1954.....	2,526	168,424	120,251,036	714	44.7
1955.....	2,529	171,761	120,558,912	702	47.2
Northwestern Northern Rhodesia:					
1949.....	64	3,870	1,675,533	433	37.0
1950.....	118	6,609	2,956,545	447	45.8
1951.....	211	12,121	6,262,457	517	44.5
1952.....	253	15,599	5,418,723	347	37.6
1953.....	258	15,380	6,739,094	438	40.7
1954.....	204	9,084	5,176,089	570	40.7
1955.....	172	8,653	5,363,800	620	44.1
South-Western Area:[2]					
1956.....	2,836	204,026	171,671,368	841	38.4
1957.....	2,723	182,212	144,338,452	792	45.9
1958.....	2,821	207,000	152,754,335	738	42.5
1959.....	2,964	216,000	191,297,891	886	40.2
1960.....	2,924	212,153	217,869,156	1,027	39.8
1961.....	2,911	224,613	233,351,177	1,039	39.4
1962.....	2,890	225,696	230,790,771	1,023	40.8
1963[3].....	2,970	246,665	194,579,000	805	48.5

[1] 1937-62 data from S.W. Marketing Board Annual Report. 1963 data from FAS reports.
[2] South-Western Area data, 1956-63, includes data for all Southern Rhodesia plus all Northern Rhodesia (excepting for the northeastern area of the latter, the tobacco from which is sold in Limbe, Nyasaland.) In short, data from 1956 on roughly combines that from the two areas treated separately up to 1955.
[3] Preliminary.

The main tobacco growers' organization in the Rhodesias and Nyasaland has been the RTA, which handled market promotion work as well as research. RTA gets its funds from a statutory levy. Levy rates in 1962 were:

	Pence per pound
All flue-cured	1/3
All Turkish	1/2

All other types were taxed as follows:

(a) South-Western area	1/3
(b) North-Eastern area	1/700

Table 5.--Sales of flue-cured Virginia tobacco at Salisbury and Limbe, seasons 1954-63

Season	Production in South-Western Area for sale in Salisbury				Production in Nyasaland and northeastern Northern Rhodesia for sale in Limbe[1]			
	Weight sold	Value	Average price		Weight sold	Value	Average price	
			Rhodesian currency	U.S. equiv.			Rhodesian currency	U.S. equiv.
	1,000 lb.	£1,000	Pence per lb.	Cents per lb.	1,000 lb.	£1,000	Pence per lb.	U.S. Cents per lb.
1954	125,427	19,965	38.20	44.5	7,115	778	26.25	30.7
1955	125,923	21,172	40.35	47.0	5,936	672	27.18	31.7
1956	171,671	23,579	32.96	38.4	6,102	589	23.16	27.0
1957	144,286	23,672	39.37	45.9	4,350	516	28.13	32.8
1958	152,751	23,200	36.45	42.5	3,265	329	24.13	28.1
1959	191,296	27,451	34.44	40.2	3,933	443	26.98	31.5
1960	217,867	31,012	34.16	39.8	4,540	600	31.71	37.0
1961	233,349	32,879	33.82	39.4	3,429	395	27.65	32.2
1962	230,791	33,623	34.96	40.8	3,563	502	33.80	39.4
1963[2]	194,783	33,780	41.62	48.5	3,797	528	34.10	39.8

[1] Includes tobacco from Northeastern Northern Rhodesia sold on Salisbury auction floors before 1961.
[2] Preliminary data.

Table 6.--Sales of flue-cured tobacco on Salisbury auctions by country of destination[1], 1960-63

Destination	Weight purchased				Percent of total sales			
	1960	1961	1962	1963	1960	1961	1962	1963
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Percent	Percent	Percent	Percent
United Kingdom...	109.0	109.6	93.7	108.0	50	47	41	55.4
Australia.....	10.7	8.1	3.9	3.5	5	3	2	1.7
Republic of South Africa.....	([2])	1.9	2.2	3.0	--	1	1	1.6
Local market.....	8.1	11.3	5.7	8.2	4	5	2	4.2
Other markets....	90.0	102.4	125.2	72.3	41	44	54	37.1
Unallocated.....	([3])	.1	.1		--	--	--	
Total.....	217.8	233.4	230.8	194.8	100	100	100	100.0

[1] Destination by markets as declared by buyers. Preliminary. 1963 data.
[2] If any, in others.
[3] Only 3,000 pounds.

In recent years, export promotion work for Rhodesian tobacco has been carried on by the Tobacco Export Promotion Council of Rhodesia and Nyasaland (TEPCORN).

TEPCORN was started by private enterprise in 1958. It was formally established as a statutory body by the Federal Tobacco Marketing Levy Act in January 1961.

Marketing inquiry

In 1962 a Committee, appointed to inquire into the Rhodesian marketing system for flue-cured tobacco, stated:

"We recommend that the auction selling system for flue-cured tobacco should remain compulsory and the auctions unfettered and free.

"We recommend that government give consideration to the appointment of an agricultural attaché to the establishment of the Federal office in Washington, with a special responsibility to act as tobacco liaison officer.

"We recommend that government give favorable consideration to the provision of loans on easy terms for the erection of tobacco buildings to cope with production on the current scales, and to providing an incentive in the form of increased initial allowance for taxation purposes on tobacco barns and grading sheds.

"We recommend that the Tobacco Industry Board appoint two curing consultants and at least three tobacco grading consultants, and make their services available to growers."

The Committee also recommended that unidentified sales be continued, that plural selling be instituted on a voluntary basis, and that the Board consider the possibility of a regulation giving tolerances for mixed bales.

Exports and prices

Some of the characteristics of export prices of flue-cured tobacco exported by the Federation of Rhodesia and Nyasaland, 1950-1962, are:

(a) Prices of tobacco exported to the United Kingdom from 1950 through 1961 were generally upward, an increase of about 31 percent for the period. The quantity exported to the United Kingdom increased over 58 percent between 1955 and 1961.

(b) Average prices of tobacco exported to Australia have been on a downward trend since 1952. They have decreased approximately 27 percent. Quantities exported to Australia have decreased since 1960, because of the "mixing regulation" and because of increases in Australian tobacco production.

(c) The trend of the average export price to "other markets" has been slightly downward. This is probably caused partly by the increased quantities shipped to the United Kingdom at increasing prices, enabling Federation exporters to price the remaining portion of their tobacco at attractive prices to "Other" countries.

(d) The average prices of exports to all countries has increased approximately 9 percent. This increase can be explained by larger exports to the United Kingdom at increased prices. The higher prices paid Rhodesia (higher than comparable quality non-Commonwealth tobacco might receive) by the United Kingdom manufacturers can be attributed in large part to the "Commonwealth preference" of 21.6¢ per pound. (The preference is not granted on tobacco from non-Commonwealth producing countries.) Rhodesian tobacco receives a duty preference also in Australia, Hong Kong, and Aden. The effect of this preference tends to help the overall average price of exports.

Prospects

A larger harvest of Rhodesian flue-cured is planned for 1964. Some of the leaders recommend a 5 percent per year increase. The 1963 harvest was much less than their goal, the 1964 crop may be in the neighborhood of 260 million to 280 million pounds, which seems large when compared with the 1963 crop. The 1963 harvest of 182 million was much below what was anticipated. The acreage for harvest in 1964 is currently estimated at 270,000 acres, 10 percent above 1963.

There is considerable land in Southern Rhodesia for much greater production of flue-cured; in addition, the present groups of growers (about 3,000) have the necessary land, equipment, and "know-how". If these large-scale growers are afforded conditions for expansion, they will undoubtedly take advantage of the opportunity.

There are several causes of uncertainty, any one of them could adversely affect the expansion of Rhodesian flue-cured. The factors which appear most formidable are:

Increase in production costs, with the major pinch coming from rises in labor cost.

Possible decreases or elimination of the "Commonwealth preference".

Table 7.--SOUTHERN RHODESIA, NORTHERN RHODESIA, AND NYASALAND: Exports of flue-cured tobacco just before formation of the Federation, 1950-54

Year	Southern Rhodesia	Northern Rhodesia	Nyasaland	Total
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
1950.....	88.1	6.3	2.1	96.5
1951.....	67.0	10.5	2.7	80.2
1952.....	87.9	9.0	2.6	99.5
1953.....	80.5	10.5	2.3	93.3
1954.....	100.0	5.0	2.6	107.6

Table 8.--FEDERATION OF RHODESIA AND NYASALAND: Exports of flue-cured tobacco, by destination, 1955-62

Destination	1955	1956	1957	1958	1959	1960	1961	1962
	Mil. lb.	Mil. lb.	Mil. lb.	Mil lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
United Kingdom	60.2	77.7	67.6	65.0	82.3	90.8	95.2	80.8
Australia	11.1	8.5	8.9	10.8	11.9	11.9	8.4	4.1
Republic of South Africa	10.9	16.8	3.0	2.5	3.7	4.3	4.0	3.2
Federation of Malaya	.9	.8	.1	.1	1.5	2.4	3.3	3.2
Nigeria	1.7	1.1	1.5	1.0	.8	.3	.8	.3
Austria	.8	.7	.9	.1	.1	(1)	--	2.6
Belgium-Luxembourg	2.0	6.1	5.4	3.5	6.3	7.4	6.4	8.1
Republic of the Congo[2]	1.4	2.1	2.2	.6	2.0	.4	1.0	.9
Denmark	1.6	2.1	1.7	3.0	2.3	2.0	2.5	3.0
West Germany	3.6	3.5	8.5	11.2	16.0	18.8	23.7	25.6
Switzerland	.1	.3	.3	.1	.2	.7	1.1	1.4
Netherlands	5.8	12.0	5.7	11.4	10.0	12.0	11.9	12.2
Sweden	1.0	1.1	.5	.2	.7	(1)	1.0	1.0
Egypt	.7	.1	.1	.4	.3	.5	--	.6
France	.5	.2	.6	.2	.3	.1	.1	1.4
Norway	.6	.7	1.2	.7	.8	1.3	1.4	1.1
Portugal	.3	.6	.7	.2	.3	.3	.3	.5
Other French Possessions in Africa	.2	.4	.2	.4	.3	.2	.3	--
Hong Kong	.5	1.4	1.7	1.9	3.7	2.1	5.3	6.4
Cyprus	.3	.3	.3	.1	.3	.2	.1	.1
British West Indies	--	--	.2	.3	.3	.7	1.1	.8
Finland	--	1.0	(1)	.2	.2	.2	.5	1.3
Italy	--	--	--	--	--	--	--	10.5
Singapore	--	(1)	.7	.5	.9	1.8	1.9	3.3
Mozambique	--	.1	.1	.1	.2	.3	.5	.3
New Zealand	--	--	(1)	.2	.3	.9	1.0	1.1
British Guiana	--	--	(1)	(1)	(1)	.2	.4	.3
Japan	--	--	(1)	(1)	(1)	1.1	6.4	6.5
Kenya	--	--	--	.4	.1	.4	.8	--
Malta	--	--	(1)	(1)	.1	.2	.3	.1
Other	2.3	1.5	1.8	1.6	3.5	3.1	2.9	9.7
Total	106.5	139.1	113.9	116.7	149.4	164.6	182.6	189.8

[1] Too small to list separately; included in other. [2] Data are for the Congo (Leopoldville), formerly Belgium Congo, including Ruandi Urundi.

The Congo (Brazzaville), formerly part of French Equatorial Africa, brought 0.6 million pounds in 1962.

Increasing production of flue-cured in many other countries which will compete with Rhodesian leaf.

The increase in imports by the EEC of tobacco from Associated Overseas Countries. (AOC). Increases in imports from Greece and Turkey.

Any increases in tobacco production aimed at self-sufficiency in countries where Rhodesia is currently selling tobacco; this may tend to limit Rhodesian exports.

Table 9.--UNITED KINGDOM: Imports of unmanufactured tobacco, by source, averages 1935-39, 1946-50, 1951-55, annual 1956-62

Year	Commonwealth countries				
	Rhodesia and Nyasaland	India	Canada	Other	Total
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
Average:					
1935-39	28,423	19,626	14,268	1,283	63,600
1946-50	54,600	29,974	14,418	2,442	101,434
1951-55	70,973	36,506	28,587	1,963	138,029
Annual:					
1956	84,384	40,017	21,677	1,048	147,126
1957	79,918	35,601	25,647	1,438	142,604
1958	74,636	44,683	23,435	1,984	144,738
1959	86,864	37,378	29,666	2,772	156,680
1960	103,420	42,474	30,172	3,688	179,754
1961[1]	102,028	43,583	34,799	[2] 1,083	181,493
1962[1]	91,892	39,933	35,505	[2] 892	168,222

Year	Non-Commonwealth countries except U.S.	U.S.A.	Total, all sources	U.S. share
	1,000 pounds	1,000 pounds	1,000 pounds	Percent
Average:				
1935-39	4,826	200,836	269,262	74.6
1946-50	14,339	207,446	323,219	64.2
1951-55	13,717	128,192	309,938	51.0
Annual:				
1956	10,978	160,267	318,371	50.3
1957	7,671	168,056	318,331	52.8
1958	7,349	164,392	316,479	51.9
1959	3,555	140,423	300,658	46.7
1960	4,662	177,318	361,734	49.0
1961[1]	6,699	157,207	[3] 345,399	45.5
1962[1]	6,318	105,810	[3] 280,350	37.7

[1] Data largely from Tobacco Intelligence. [2] Does not include Republic of South Africa (3.4 million lb. in 1961 and 4.0 million lb. in 1962). [3] Includes imports from Republic of South Africa.

Table 10.--FEDERATION OF RHODESIA AND NYASALAND: Average export prices for flue-cured tobacco, by destinations, 1950-62

Year	United Kingdom	Australia	Other markets	Average all markets
	Equiv. U.S. cents per pound	Equiv. U.S. cents per pound	Equiv. U.S. cents per pound	Equiv. U.S. cents per pound
1950.....	57.0	63.2	44.5	54.4
1951.....	62.8	77.6	38.9	56.5
1952.....	68.3	79.0	36.4	59.8
1953.....	67.9	77.3	36.8	61.3
1954.....	65.4	74.7	36.2	58.3
1955.....	70.4	72.6	42.5	61.4
1956.....	63.3	69.7	28.7	50.6
1957.....	71.7	67.6	37.7	60.2
1958.....	72.2	68.2	35.0	58.8
1959.....	73.6	60.5	31.2	56.9
1960.....	72.5	58.3	34.2	59.1
1961.....	75.6	57.4	39.6	59.2
1962.....	73.8	56.8	40.1	54.8

Table 11.--FEDERATION OF RHODESIA AND NYASALAND: Exports of unmanufactured tobacco to selected countries of European Economic Community, average 1950-54, annual 1958-62

Destination	Average 1950-54	1958	1959	1960	1961	1962[1]
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
Germany.....	2.0	11.3	16.0	19.0	24.1	25.8
Benelux.....	7.7	17.5	19.4	22.5	22.9	22.8
France.....	[2].4	.2	.3	.1	.2	1.6
Italy.....	0	0	0	0	0	10.5
Total EEC....	10.1	29.0	35.7	41.6	47.2	60.7

[1] Preliminary - Rhodesian flue-cured only. [2] Two-year average (1953 and 1954).

Table 12.--FEDERATION OF RHODESIA AND NYASALAND: Average export prices of all tobacco exported to selected countries of European Economic Community, 1958-62

Destination	1958	1959	1960	1961	1962
	Equiv. U.S. cents/lb.	Equiv. U.S. cents/lb.	Equiv. U.S. cents/lb.	Equiv. U.S. cents/lb.	Equiv. U.S. cents/lb.
Germany.....	38.7	35.9	40.3	42.5	47.6
Benelux.....	27.2	23.3	23.8	26.3	32.9
France.....	50.0	38.7	42.0	35.9	52.1
Italy.....	--	--	--	--	34.3

Turkish

Approximately 2,000 acres of Turkish (oriental) type tobacco are planted in Southern Rhodesia, with an average production of about 600,000 pounds. In 1960, 2,450 acres were grown, and total production amounted to 1,879,000 pounds. Both acreage and production have decreased on European-owned farms since 1960. By contrast, African farmers who produced 230,000 pounds of Turkish type tobacco in Southern Rhodesia in 1961 and 54,000 in 1962, produced an estimated 1.26 million pounds in 1963.

Turkish tobacco has possibilities as a developing crop for Africans in Southern Rhodesia; these growers planted 119 acres in 1962, and an estimated total of 440 acres in 1963.

Increased production of Turkish tobacco has the enthusiastic support of the Prime Minister of Southern Rhodesia. He has estimated that $5 million to $7 million could be added to overall annual income by increasing Turkish production.

Turkish tobacco was badly damaged by the "bushy top" disease in 1960. A total of approximately 5,000 acres were planted that year (approximately 2,000 of it by African growers), but because of weather conditions and other factors "bushy top" played havoc with the crop. In 1960, total production was approximately 1.9 million pounds, but it dropped to about 0.6 million pounds in 1961 and again to 0.3 million pounds in 1962. Some of those who believe that Turkish-type tobacco offers opportunities for utilizing the Federation's labor surplus feel that there is now new hope in Rhodesia for this crop after the recent successful research campaign against the bushy-top virus. It is now recommended that Turkish should not be grown close to flue-cured tobacco areas, as more infection has occurred under these circumstances.

Table 13.--FEDERATION OF RHODESIA AND NYASALAND: Production of Turkish tobacco, 1950-63

Year of harvest	Southern Rhodesia		Northern Rhodesia		Nyasaland		Federation total	
	Area planted	Production	Area planted	Production	Area planted	Production	Area planted	Production
	Acres	1,000 lb.	Acres	1,000 lb.	Acres	1,000 lb.	Acres	1,000 lb.
1950.....	([1])	276	([1])	175	([1])	--	([1])	--
1951.....	([1])	99	([1])	72	([1])	--	([1])	--
1952.....	([1])	159	([1])	11	([1])	--	([1])	--
1953.....	([1])	127	([1])	35	([1])	--	([1])	--
1954.....	([1])	143	([1])	37	([1])	--	([1])	--
1955.....	520	259	390	127	([1])	--	910	386
1956.....	1,200	460	230	93	([1])	6	1,430	559
1957.....	1,820	853	210	86	([1])	2	2,030	941
1958.....	850	356	170	85	([1])	6	1,020	447
1959.....	1,660	814	310	150	([1])	--	1,970	964
1960.....	2,540	1,879	460	454	([1])	35	3,000	2,386
1961.....	2,863	809	870	306	190	64	3,923	948
1962.....	[2] 504	291	725	272	170	68	1,399	631
1963[4].....	2,484	1,242	([3])	([3])	260	104	2,744	1,346

[1] Not available.
[2] European acreage only; acreage grown by African farmers not available.
[3] Not currently available.
[4] Preliminary data.

Burley

Southern Rhodesian farmers are now showing a keen interest in production of cigarette-type burley. Until recently, burley tobacco (heavy burley) had been produced only in the Eastern Province of Northern Rhodesia and Nyasaland. The production of burley in Southern Rhodesia is becoming a secondary tobacco crop on some of the larger farms which grow flue-cured and is being grown on some maize farms as well. Some of the

growers of flue-cured tobacco are also increasing acreages of burley sharply. Yields of burley have been satisfactory; the air-curing operation is not as expensive as flue-curing. Because of the high humidity during the curing season, growers have been experiencing difficulties with the burley-curing procedures, and some have been faced with barn or pole rot.

Several varieties of burley have been grown in the "Federation." Some which have been tried are: Barnet Special, Briarvet, Stand Upright, Station Stand Upright, and strains of Burley 1, Burley 21, Ky 9, and Mammoth Ky 22.

The United States can expect increasing competition from burley tobacco grown in the "Federation." Officials of the Federal Government (prior to the separation of the territories) had hopes for reaching a production goal of 10 million pounds of cigarette-type burley by 1965, and an ultimate goal of 40 million pounds. An appraisal of the future of burley in each of the three territories is discussed in their respective sections.

Table 14.--SOUTHERN RHODESIA: Burley acreage and production, 1957-58 to 1962-63

Year	Area planted	Production	Year	Area planted	Production
	Acres	1,000 pounds		Acres	1,000 pounds
1957-58.....	(1)	32	1960-61.....	30	22
1958-59.....	(1)	22	1961-62.....	165	91
1959-60.....	--	--	1962-63.....	2,057	1,255

[1] Not available.

Table 15.--SOUTHERN RHODESIA: Costs and returns on 15 acres of Rhodesian-grown burley-type tobacco, 1961-62 season[1]

Item	Per acre	Total
	Dollars	Dollars
Costs:		
Labor	104.72	1,570.80
Tractors	21.19	317.80
Motor transport	12.91	193.83
Other costs:		
Fertilizer	41.33	620.15
Seedbed sprays	.61	9.10
Curing equipment (wire, etc.)[2]	4.06	60.76
Adaptation of bldgs.[2]	10.09	151.39
Packing material	7.12	106.77
Transport	.75	11.20
Miscellaneous	.19	2.80
Total Costs	202.97	3,044.60
Returns:		
13,193 pounds (at 40.1 ¢ per lb)	352.69	5,290.39

[1] Average yield, 866 pounds per acre. [2] Nonrecurring costs.

Table 16.--RHODESIA AND NYASALAND: Burley-type tobacco exports, by destination, 1958-63[1]

Destination	1958		1959		1960		1961		1962		1963	
	Quantity	Avg. price	Quantity	Avg. price	Quantity	Avg. price	Quantity	Avg. price	Quantity	Avg. price	Quantity	Avg. price
	Mil. pounds	U.S. dollar	Mil. pounds	U.S. dollar	Mil. pounds	U.S. dollar	Mil. pounds	U.S. dollar	Mil. pounds	U.S. dollar	Mil. pounds	U.S. dollar
United Kingdom..	1.0	0.61	0.5	0.60	0.5	0.73	0.5	0.70	0.9	0.75	0.6	0.76
Ireland.....	--	--	--	--	--	--	--	--	--	--	(2)	.79
Australia.....	--	--	--	--	--	--	--	--	--	--	(2)	.70
South Africa....	.3	.44	.8	.55	.8	.71	.8	.66	.6	.73	1.6	.73
Hong Kong.....	.3	.42	.8	.36	.4	.36	.5	.34	.8	.39	1.2	.43
British Honduras	--	--	--	--	--	--	--	--	--	--	(2)	.66
Belgium-Luxembourg....	.1	.19	.1	.27	.1	.41	.2	.36	(2)	.37	.2	.41
Congo (Leopoldville)	.1	.30	--	--	--	--	--	--	.1	.47	.2	.57
Denmark.....	--	--	.1	.32	.1	.34	--	--	.1	.44	.1	.28
Germany, W.....	--	--	(2)	.51	(2)	.45	.2	.29	.2	.52	1.1	.51
Netherlands.....	.2	.30	.3	.23	.3	.36	.2	.28	.2	.42	1.1	.41
Portugal.....	--	--	--	--	.1	.42	.2	.38	.7	.53	.5	.43
Mozambique.....	(3)	--	(3)	--	(3)	--	(3)	--	(3)	--	(2)	.34
Canary Islands..	(3)	--	(3)	--	(3)	--	(3)	--	(3)	--	(2)	.43
Switzerland.....	(3)	--	(3)	--	(3)	--	(3)	--	(3)	--	.4	.47
Persian Gulf States.....	(3)	--	(3)	--	(3)	--	(3)	--	(3)	--	(2)	.04
Bahrein.....	(3)	--	.1	.02	(2)	--	--	--	(2)	.06	(2)	.06
Others.....	(2)	--	.3	--	.1	--	.3	--	(3)	--	(3)	--
Total.....	2.0	.48	2.9	.42	2.4	.56	2.9	.50	3.6	.58	7.0	.54

[1] Includes pipe burley.
[2] Less than 50,000 pounds.
[3] None listed.

Table 17.--Burley exports from the Federation and from selected other exporters, and average export prices, 1958-62

Source	1958		1959		1960		1961		1962	
	Quantity	Price	Quantity	Price	Quantity	Price	Quantity	Price	Quantity	Price
	Mil. lb.	Cents/lb.	Mil. lb.	Cents/lb.	Mil. lb.	Cents/lb.	Mil. lb.	Cents/lb.	Mil. lb.	Mil. lb.
Federation.	2.0	48.4	2.9	41.9	2.4	56.0	2.9	49.7	3.5	59.7
United States...	28.8	79.8	31.9	85.4	33.6	82.4	36.6	82.2	[1] 39.8	[1] 87.4
Italy[2].....	10.7	40.2	10.7	44.2	12.1	45.3	11.3	44.6	9.3	43.6
Japan.....	4.0	34.4	8.0	31.6	6.5	31.4	9.2	34.7	8.0	39.3
Canada.....	1.6	50.9	2.5	56.9	2.1	56.2	[3] .5	58.0	1.5	60.1

[1] Preliminary.
[2] Fiscal years.
[3] Canada did not grow burley in 1960. No acreage were allotted.

Prospects.--Commercial production of cigarette-type burley in Southern Rhodesia has barely started. In 1962, 91,000 pounds were produced and sold (less than that in previous years). Production for sale in 1963 jumped to an estimated 1.5 million pounds. More expansion is planned; this will probably make Southern Rhodesia the leading burley territory of the Federation.

Some of the factors which will contribute to the success of burley in Southern Rhodesia are a wide variety of soils on which to grow the tobacco, and a mild climate (although it may be too humid at curing time for best results).

Much of the expansion in burley production in Southern Rhodesia will be on present tobacco farms, where operators know tobacco culture and are already "tooled up" for producing tobacco. Burley offers a chance for growers of flue-cured to spread risks. Additional expansion can be expected on maize farms where land has been cleared and sizable acreages of row crops are already being produced. Burley will make another cash crop for such farmers.

Salisbury is already an established tobacco market; the marketing and packing installations there would lend themselves to the marketing of burley.

Rhodesia and Nyasaland burley has in the past been a heavier pipe-type burley (red). Southern Rhodesian growers who are just beginning to raise it will attempt to grow lighter burley. The climate and other factors may, however, result in the product being largely filler-type leaf.

It is most likely that export promotion of burley will be handled by TEPCORN which is a going and vigorous organization.

Some of the factors which may tend to cause an expansion of burley type on farms now producing flue-cured tobacco are:

(a) Production costs per acre are lower than for flue-cured;

(b) Yields per acre are larger;

(c) The crop can be stalk-harvested, thus requiring less labor but more curing space, and spreading labor demand over a longer period;

(d) Prices for burley tobacco in Southern Rhodesia have generally been encouraging to growers; costs are now rising;

(e) World demand for cigarette-type burley has been increasing.

NORTHERN RHODESIA

At present, Northern Rhodesia produces a total of less than 20 million pounds of tobacco compared with Southern Rhodesia's total of over 200 million. However, changes in the farmer's production practices following dissolution of the Federation may lead to increased output. Production in Northern Rhodesia is likely to shift to larger numbers of African farmers, with the possibility of increased production in future.

Flue-Cured

In Northern Rhodesia most flue-cured tobacco is produced in the sandveld areas on either side of the Livingstone-Lusaka road. Production is concentrated around Kalomo and Chomo. There is, however, some output also in the Central Province around Chisamba, the Broken Hill area, and MKushi. The MKushi settlement scheme in Northern Rhodesia was planned in 1951 and listed tobacco as a possible economic crop, and tobacco growing has proven feasible there. In 1958, the "MKushi Assisted Settlement Scheme" came into operation.

The land was surveyed and farms planned which contained at least 500 acres and sufficient water possibilities for growing 40 acres of tobacco. The Lands Department guaranteed immediate loans to growers, up to $12,600 for the erection of buildings and other permanent developments.

The settler needed to have $8,400, or cash and equipment of that value, and at least 2 years of practical tobacco-growing experience.

Flue-cured tobacco is produced on European-owned farms in Northern Rhodesia, and production practices are about the same as those used in Southern Rhodesia. They have been planting 12,000 to 17,000 acres of flue-cured tobacco per year in recent years with a total production ranging from 7 million to 15 million pounds.[3] Statistics show that average yields are about 200 pounds less per acre than those in Southern Rhodesia.

Growers in the Chomo and Kalomo areas (the western portion) and growers in the Central Province send their flue-cured tobacco to Salisbury for sale on the auction floors.

Flue-cured from the Fort Jameson and adjacent areas in Eastern Province of Northern Rhodesia is marketed through the Nyasaland auctions at Limbe.

Table 18.--NORTHERN RHODESIA: Tobacco production, MKushi Block, 1959-63

Year	Growers	Planted area	Average yield per acre	Production
	Number	Acres	1,000 lb.	Pounds
1959.....	30	1,350	1,314	970
1960.....	37	1,900	1,583	832
1961.....	57	2,660	1,996	752
1962.....	56	2,835	2,270	800
1963.....	69	4,200	[1] 3,550	[1] 850

[1] Estimated.

[3] There are approximately 300 growers of flue-cured in the Northwestern area and currently only about a half dozen growers of flue-cured in the North-Eastern area--the latter area markets its tobacco through the auctions in Limbe, Nyasaland, and other (larger) groups sell through the Salisbury market.

Table 19.--NORTHERN RHODESIA: Area planted and production of tobacco by types, 1949-50 to 1962-63

Year	Va. flue-cured		Burley		Turkish		Total[1]	
	Acres	1,000 pounds	Acres	1,000 pounds	Acres	1,000 pounds	Acres	1,000 pounds
1949-50.....	14,574	6,409	195	60	359	121	15,268	6,654
1950-51.....	21,835	10,698	118	49	257	72	22,290	10,853
1951-52.....	23,525	9,571	138	50	83	11	23,806	9,670
1952-53.....	21,779	10,779	190	90	134	35	22,107	10,907
1953-54.....	14,607	8,542	161	49	140	23	14,968	8,622
1954-55.....	13,554	8,311	459	148	388	126	14,461	8,593
1955-56.....	14,866	10,269	419	187	232	80	15,582	10,549
1956-57.....	12,103	9,344	408	189	205	68	12,742	9,617
1957-58.....	12,860	6,773	1,100	550	170	85	14,130	7,408
1958-59.....	13,870	12,628	1,044	557	310	149	15,224	13,354
1959-60.....	14,830	12,473	800	636	460	454	16,090	13,563
1960-61.....	16,950	14,840	[2] 1,380	1,000	870	306	19,200	16,146
1961-62.....	16,870	16,147	2,200	1,626	725	272	19,795	18,045
1962-63.....	13,700	[3] 14,130	5,008	[4] 3,055	([5])	([5])	[6] 18,708	[6] 17,185

[1] Includes small amounts of sun-air cured.
[2] European acreage only; acreage for African production not available.
[3] 13 million lbs. from Northwestern Northern Rhodesia, and 1,130,000 lbs. from northeastern Northern Rhodesia.
[4] Sold at Limbe auctions.
[5] Complete data not yet available.
[6] Does not include Turkish.

Table 20.--NORTHERN RHODESIA: Flue-cured tobacco production or sales by area or market 1958-63

Year	Western Area production, for Salisbury market		Northeastern production, for Limbe market		Total sales
	Sales	Average yield	Sales	Average yield	
	Mil. lb.	Pounds	Mil. lb.	Pounds	Mil. lb.
1958.....	5.7	526	1.1	[1] 500	6.8
1959.....	10.9	911	1.7	[1] 800	12.6
1960.....	10.9	847	1.6	802	12.5
1961.....	13.7	914	1.1	574	14.8
1962.....	15.9	986	1.0	664	16.9
1963.....	13.0	([2])	1.1	([2])	14.1

[1] Estimated.
[2] Not available.

Burley

The government and the tobacco extension specialists as well as the marketing organizations are encouraging production of burley-type tobacco by both European and African farmers.

Output of burley has risen very rapidly in Northern Rhodesia. European farms produced a total of 193,000 pounds in 1957, 751,000 pounds in 1961, 1.3 million pounds in 1962, and 3.1 million pounds in 1963. (Data are not available as to the proportions which were heavy burley, or light.)

Table 21.--NORTHERN RHODESIA: Acreage and production of burley-type tobacco, 1955-63

Year[1]	Area planted	Production		Yield
		European	African	
	Acres	1,000 lb.	1,000 lb.	Pounds per acre
1955.....	460	150	--	327
1956.....	420	180	--	429
1957.....	410	192	--	470
1958.....	1,100	531	19	487
1959.....	1,040	547	30	524
1960.....	800	570	66	714
1961.....	1,380	750	250	544
1962.....	2,200	1,326	300	608
1963[2].....	5,008	([3])	([3])	610

[1] Year harvested.
[2] Preliminary.
[3] Estimated production, European and African, 3,100,000 lb.

Table 22.--NORTHERN RHODESIA: Sales of burley produced by Africans in Eastern Province, 1950-63

Year of harvest	Quantity	Average price per pound	
		Rhodesian currency	Equivalent in U.S. currency
	Pounds	Pence	Cents
1950.....	264,000	26.96	31.4
1951.....	192,000	20.40	23.8
1952.....	24,000	28.22	32.9
1953.....	20,696	29.56	34.5
1954.....	44,774	25.97	30.3
1955.....	6,876	25.12	29.3
1956.....	6,890	18.29	21.3
1957.....	12,154	34.87	40.7
1958.....	19,688	18.18	21.2
1959.....	29,647	22.09	25.8
1960.....	64,621	31.70	37.0
1961.....	249,185	24.00	28.0
1962.....	300,000	30.60	([1])
1963.....	([1])	([1])	([1])

[1] Not currently available.

Fire-Cured and Sun-Cured

Fire-cured is not now grown on a commercial scale in Northern Rhodesia.

There is relatively little sun-cured tobacco grown in Northern Rhodesia; this is grown by Europeans. Production decreased from 225,000 pounds in 1960 to 15,000 pounds in 1962.

Turkish

About 100,000 pounds of Turkish tobacco is being produced on European farms in Northern Rhodesia, and about 300,000 pounds on African farms. Efforts are now being made to encourage African farmers to increase production.

A number of years ago (1946 and 1947) Northern Rhodesia produced about 1 million pounds of Turkish type tobacco per year. Later, poor quality, high labor input, and low prices contributed to such decreases in production that for 10 years Northern Rhodesian output averaged only 67,000 pounds per year.

By 1960, production had increased again to 217,000 pounds. However, acreage this year was higher than production indicated, with the "bushy top" disease causing low yields and quality. This dashed hopes of furnishing some of the export tobacco needed because of shortages in Greece and Turkey, caused by blue mold.

In 1963, total production was down sharply again.

Prospects

There are a great many variables influencing future tobacco production in Northern Rhodesia, as the country withdraws from the Federation and its government operates as an independent unit.

An appraisal for flue-cured involves the fact that production has ranged between 10 million and 17 million pounds and has come from European farms, with all marketed through the auction sales in Salisbury except for that portion produced in the Northeastern part.

If the new government in Northern Rhodesia should permit production and marketing of flue-cured to continue in the present manner, production may change relatively little. Areas like the Mkushi Block offer opportunities for expansion. If, on the other hand, the government should attempt to shift production of flue-cured to small farms operated by Africans, there would probably be a shortage of people with the "know-how" for efficient production, and of capital available for small growers to get started. It must be kept in mind that average yields under the present system have been about 200 pounds per acre less than in Southern Rhodesia; this takes away some of the incentive for any expansion. Should Northern Rhodesia attempt to organize its own tobacco auctions and export promotion program, it will face many problems and difficulties.

As mentioned elsewhere in this paper, officials and tobacco extension specialists look to culture of burley to hold some promise for individual African farmers. Tobacco specialists there have started their program for expansion in burley production. Cultural methods and practices are being taught to growers, plans for barn construction and curing procedures are also being discussed with the growers.

These and other factors indicate that there may be significant expansion in burley in Northern Rhodesia.

The future of the production of turkish-type tobacco will depend a great deal on the world supply and price and on the willingness of African families to perform the large amount of hand labor this type requires for production.

NYASALAND

The character of Nyasaland tobacco production differs considerably from that of the Rhodesias in participation of so many small African producers, in terms both of numbers and also of volume of tobacco produced. (These African farmers grow the bulk of the fire-cured tobacco, and are credited with producing over three-fourths of total Nyasaland tobacco output.)

There are 40,000 to 65,000 African farmers registered to grow fire-cured, with both the number of actual growers and volume of production varying widely from year to year (Total fire-cured produced by Nyasaland has ranged from 15 million pounds to 34 million, in recent years). In 1961, approximately 6,000 African farmers also grew about 3.7 million pounds of sun-cured tobacco from about 13,000 acres. However, only a few African farms produce flue-cured.

By contrast, European-owned farms produce about 3 million pounds of flue-cured, an estimated 3 million to 10 million pounds of fire-cured, 2 million to 7 million pounds of sun-cured, and increasing amounts of burley type (over 4 million pounds in 1962) each year. In addition, Nyasaland produces varying small quantities of Turkish-type tobacco, amounting to 60,000 pounds for the 1958-59 season, 234,000 pounds for 1959-60, and 104,000 in 1963.

Table 23.--NYASALAND: Total planted area and production of tobacco, 1949-50 to 1962-63

Year[1]	Planted area	Production
	Acres	1,000 lbs.
1949-50.....	163,000	31,837
1950-51.....		36,063
1951-52.....	118,300	20,079
1952-53.....	135,200	36,074
1953-54.....	121,276	33,144
1954-55.....	105,981	22,817
1955-56.....	122,081	34,503
1956-57.....	135,476	33,763
1957-58.....	166,800	38,811
1958-59.....	171,885	36,825
1959-60.....	119,504	34,315
1960-61.....	102,967	26,719
1961-62.....	127,082	42,612
1962-63[2].....	136,283	46,875

[1] Harvested second half of the fiscal year.
[2] Preliminary.

Burley-type tobacco in Nyasaland has been produced almost entirely on European-owned estates. On some, tobacco is grown by hired African laborers, living on the estate or nearby. On other estates African families (who may own land elsewhere), grow tobacco on a tenant or share-crop (short-term) basis. On a few of the estates, there may be a hundred or more families, with each family growing 1 to 2 acres of burley-type tobacco. With much of the work performed by members of the tenant families, cash production costs are relatively low.

Even under close supervision, quality is difficult to maintain, partly because of excessive rain at times during the growing season and also because humidity is often high during the curing season. Curing barns for burley have not been developed very extensively and growers are inclined to crowd too much tobacco in the existing barns.

The Nyasaland Farmers' Marketing Board (formerly the African Production and Marketing Board) with its local installations and demonstration farms, has been an important factor in production and marketing of tobacco and other crops by Africans.

Nyasaland growers (Africans only) have received subsidies for tobacco production. Subsidies of modest amounts have been made for fertilizers and for adoption of improved farm practices. The grants were reported to be tied to, or contingent upon, the growers' providing curing barns meeting certain standards. Fertilizer subsidies in 1961 amounted to approximately $49,000.

The Nyasaland Farmers' Marketing Board, several years ago (at that time the African Production and Marketing Board) decided to distribute small two-wheeled "Scotch" ox carts, with part of the cost subsidized, in order to help tobacco growers transport crops to market and also haul compost and manure. About 600 carts were brought in originally, and at the time it was thought by the officials that this would be about all that was required. Growers soon made good use of them, and about 100 new ones are now distributed annually. The ox-cart subsidy was approximately $5,600 in 1961.

Table 24.--NYASALAND: Acreage and production of selected types of tobacco, 1949-50 to 1962-63

Year[1]	Fire-cured		Sun-cured		Burley		Flue-cured	
	Acreage	Production	Acreage	Production	Acreage	Production	Acreage	Production
	Acres	1,000 lb.	Acres	1,000 lb.	Acres	1,000 lb.	Acres	1,000 lb.
1949-50.....	140,000	24,010	16,000	4,416	2,000	807	5,000	2,604
1950-51.....	--	25,354	--	5,333	--	1,366	--	4,010
1951-52.....	97,700	12,556	8,600	3,002	3,700	1,002	8,300	3,519
1952-53.....	110,000	24,362	13,600	6,286	4,800	1,691	6,800	3,735
1953-54.....	97,100	23,590	12,000	3,299	4,913	1,949	7,263	4,306
1954-55.....	84,971	14,782	8,748	2,324	5,471	2,017	6,791	3,964
1955-56.....	98,967	25,426	9,199	2,680	5,708	2,278	8,207	4,119
1956-57.....	114,897	25,541	9,439	3,035	5,242	2,173	5,898	3,015
1957-58.....	143,200	30,895	11,200	2,509	7,500	3,209	4,900	2,198
1958-59.....	149,236	26,401	13,733	5,425	5,485	2,749	3,431	2,251
1959-60.....	92,802	21,490	17,505	6,970	5,884	2,921	3,313	2,934
1960-61.....	71,871	15,628	19,079	5,219	8,380	3,554	3,637	2,318
1961-62.....	95,968	31,669	20,125	4,302	7,640	3,938	3,179	2,605
1962-63[2].....	106,250	34,306	18,000	5,218	8,808	4,580	2,965	2,667

[1] Harvested second half of fiscal year.
[2] Preliminary.

Nyasaland: Early-pulled lower leaves of burley hang in curing barn, while tobacco grows nearby. This burley was raised on European estates by African growers, each with about 2 acres in tobacco. Each built his own curing barn at a total cash cost of around $65 apiece.

The "Marketing Board" attempts to estimate "trade requirements" and set production "targets" for tobacco on the Trust Land (African). Targets in 1961 for tobacco production and sale on Trust Land in Nyasaland were:

	Mil. lbs.
Southern Division fire-cured	2.5
Northern Division dark-fired	18
Northern Division sun/air-cured	.5
Central Division sun/air-cured	2

Production that year fell short of the target, as output in the Northern Division was only 10.5 million pounds of dark-fired tobacco compared to the target of 18 million pounds. The shortfall was caused partly by weather, but in addition, the number of growers dropped substantially.

An effort has been made to stabilize prices to growers through a "levy fund." Briefly, the plan appeared to include an estimate of prices the "crop" should bring on an average for the season. Growers then are paid about these "estimated" prices, thus helping a grower receive such a price, even if his tobacco reached the market on a "bad" day.

As the 1959 crop of dark fire-cured in the Northern Division of Nyasaland contained a high proportion of low-quality leaf, a poor market developed. It was then announced that 5 million to 6 million pounds would be destroyed because of low quality and poor demand; as a result, prices strengthened when supplies were reduced.

The Marketing Board acquired a surplus from the trading in sun/air-cured tobacco and in the Southern Division in fire-cured, this situation helped limit the season's loss to about $1.1 million.

Africans on Trust Land have produced approximately three-fourths of Nyasaland's total tobacco production. The balance is produced on non-African estates, usually by European owners. Tobacco is often produced on the estates under a tenant system.

There is no system for subsidies or price stabilization for the tobacco produced on the "estates" operated by Europeans or other non-Africans.

Burley tobacco and Turkish-type tobaccos are sold on the auctions (Limbe), as are the other types.

The Nyasaland Government has recently passed a Special Crops Bill and published an ordinance implementing the bill. The "special crops" covered by the legislation included crops grown by both European and Africans. Tobacco is one of the crops covered. The ordinance created a Special Crops Authority which has far-reaching powers. The Ordinance virtually puts all European agriculture under almost complete control, including the tobacco estates operated by Europeans in Nyasaland.

Tea, the largest cash export crop of Nyasaland, was not included as a "special crop"; however, it might be included at a later date.

Table 25.--NYASALAND: Exports of tobacco, by type, 1948-53 (before Federation)[1]

Year	Flue-cured	Fire-cured	Sun-air	Burley	Total all types
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
1948.....	([2])	17.8	3.2	0.6	21.6
1949.....	([2])	19.1	3.0	.9	23.0
1950.....	2.1	17.8	3.5	.7	24.1
1951.....	2.7	19.3	3.8	1.0	26.8
1952.....	2.6	13.7	2.6	.8	19.7
1953.....	2.3	17.9	3.8	1.5	25.5

[1] Most of the tobacco bought in Nyasaland is exported.
[2] Not available.

Dark Fire-Cured

Both Europeans and the Africans have produced dark-fired tobacco for a good many years. The quality of Nyasaland dark fire-cured varies with the size of the crop and the season. In years when the crop is large, curing is often poorly done and quality suffers; this is caused partly by the lack of adequate and satisfactory curing barns. Prices drop in those years; growers are unhappy because of price, and the buyers are unhappy with the lower quality.

Dr. J. O. Andes, University of Tennessee, did a study of the tobacco situation in Nyasaland in February and March 1962. In his report to the Minister of Natural Resources of Nyasaland, Dr. Andes stated:

"It appears that the single factor most responsible for poor quality dark-fired tobacco is inadequate curing facilities. In fact, the cultural practices, either good or bad, are nullified by capricious curing; hence it is not easy to assess the value of what is assumed to be good practice."

The dark fire-cured tobacco industry has another hurdle which will tend to keep down any expansion in production and exports. The world demand for fire-cured tobacco is limited, and as light cigarettes increase in many world countries fire-cured tobacco will have a smaller percentage share.

In 1963, the Nyasaland Farmers' Marketing Board withheld 6 million to 7 million pounds of fire-cured from the auctions in order to help maintain the price. It is reported that the buyers were promised that the Board would not sell it to established markets but would try to sell it to new markets.

Nyasaland: Tobacco extension officer and visitor inspect a field of African-grown "dark-fire-cured" type of tobacco.

Nyasaland's exports of fire-cured tobacco compete with U.S. exports of fire-cured tobacco in world trade. Buyers making purchases of fire-cured tobacco in Nyasaland complain considerably about the quality of much of Nyasaland's fire-cured tobacco, especially the years when there is a large crop and a shortage of curing barn space, and other factors seem to combine to affect quality adversely.

The United Kingdom is the largest importer of Nyasaland's fire-cured tobacco, usually taking 5 million to 8 million pounds per year at prices which have averaged, in recent years, mostly between 34 cents and 41 cents per pound. Nyasaland's tobacco, like all tobacco from the Federation, receives a duty preference in the United Kingdom equivalent to approximately 21.5 cents per pound. Usings of Nyasaland fire-cured by United Kingdom manufacturers have decreased from about 9 million pounds in 1949, to 5.7 million pounds in 1962.

Sierra Leone has consistently been a good customer for Nyasaland's fire-cured tobacco. Prices for fire-cured tobacco exported by Nyasaland to Sierra Leone average 4-10 cents per pound higher than the prices for their exports to United Kingdom. Tobaccos from the Commonwealth countries receive a 4-cents-per-pound preference in Sierra Leone.

Nyasaland exported 1 million to 4 million pounds to the Belgian Congo from 1950 to 1961, with the quantity dropping below a million pounds only in 1960. Yearly average prices ranged from 13.5 cents to 25 cents per pound.

The Canary Islands import 1-2 million pounds of Nyasaland's fire-cured tobacco each year at average prices of 18-24 cents per pound.

Manufacturers in the Netherlands usually import 2 million pounds to 2.5 million pounds of Nyasaland fire-cured tobacco at (export) prices of 15-20 cents. The United States exports 5 million to 7 million pounds of fire-cured tobacco to the Netherlands each year; however, there is a considerable difference between quality and price of the U.S. exports to the Netherlands, and those of the exports of Nyasaland to that market.

Nyasaland also exports about 400,000 pounds annually to Belgium at prices ranging from 17-20 cents and about 200,000 pounds to West Germany at 16-18 cents per pound.

Table 26.--NYASALAND: Export of dark fire-cured tobacco, by destination, 1953-62

Destination	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
United Kingdom	8.3	7.7	5.5	8.0	7.0	6.5	5.3	6.3	4.6	5.1
Sierra Leone	1.8	1.7	1.5	1.9	1.5	1.9	1.2	2.0	1.4	1.6
Congo, Belgian	2.4	3.1	1.3	4.4	4.0	3.3	4.1	.4	1.1	.7
Canary Islands	.9	.7	.8	1.5	1.6	1.6	2.0	2.1	1.6	3.1
Fr. possessions in Africa	(1)	.7	.7	1.4	1.1	1.6	1.1	1.0	.7	(2)
Belgium and Luxembourg	.1	.3	.2	.2	.1	.3	.5	.4	.4	.6
Netherlands	.9	1.2	.6	1.1	1.7	2.0	2.1	2.1	2.5	1.3
France[1]	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	.2
Germany	(1)	(1)	(1)	(1)	(1)	(1)	.01	.3	.4	.2
Sweden	.1	.2	.5	.6	.4	.3	.2	.4	.2	.5
Egypt	1.5	1.4	1.2	.6	.1	.8	.04	--	--	(1)
Liberia	(1)	.5	.5	.4	.5	.8	.7	.8	1.2	1.1
Portuguese Overseas Provinces	(1)	.6	.5	.9	1.0	1.2	1.0	1.0	1.2	1.4
Gambia	.2	.3	.2	.1	.4	.4	.3	.2	.2	.2
Algeria	(1)	.2	.1	.3	.2	.2	.2	.1	.2	--
Ireland	(1)	.1	.1	.1	.3	.1	.2	.2	.2	.2
Others	1.7	.1	.4	.5	.8	.5	.8	1.8	.1	.2
Total	17.9	18.8	14.1	22.0	20.7	21.5	19.8	19.1	17.9	18.9

[1] If any, included in others.
[2] Not listed under this classification; if any, included in others.

Swedish manufacturers bought 200,000 to 600,000 pounds annually from 1954 through 1961. Nyasaland's exports of this type to Sweden must have included a lot of low-grade or scrap tobacco as prices averaged 5-10 cents per pound.

Other Types

While United Kingdom's usings of Nyasaland dark-fired tobacco decreased steadily from 9.2 million pounds in 1949 to 5.8 million in 1961 and decreased again to 5.7 million pounds in 1962, during the same period its usings of Nyasaland sun-cured remained steady at about 2.25 million to 2.90 million pounds. Usings of Nyasaland burley also held steady at about 600,000 pounds. Data are not readily available to help the writer in separating the usings of Nyasaland flue-cured from total usings of this type from the Federation as a whole; however, Nyasaland's exports of flue-cured are very minor.

Prospects

Nyasaland tobacco production has fluctuated considerably during the past 13 years, but has ended the period near the same level as that of the beginning. However, competition for land, labor, and other resources has tended increasingly to favor some of the alternative cash crops during recent years. Since 1959, production of peanuts (ground nuts) has increased very rapidly. These peanuts are mainly of confectionery grade, while the remainder are sold to Southern Rhodesia for oil extraction. Over the 13-year period, trends have been upward in cotton and tea output (which are now entirely confined to European-owned estates and provide half of Nyasaland's total exports).

Among foods raised for domestic consumption, corn is a chief competitor with tobacco for use of land and resources.

Table 27.--NYASALAND: Acreage, production, yield, and average price of burley-type tobacco, 1957-63

Year	Acreage	Yield	Production[1]	Price per pound
	Acres	Pounds per acre	Million pounds	Equiv. U.S. cents
1957.....	5,242	415	2.2	40.9
1958.....	7,500	427	3.2	26.6
1959.....	5,485	501	2.7	26.0
1960.....	5,884	496	2.9	38.2
1961.....	8,380	424	3.6	28.5
1962.....	7,640	510	3.9	37.8
1963[2].....	8,808	522	4.6	33.6

[1] Sales.
[2] Preliminary.

Table 28.--NYASALAND: Sun/air-cured tobacco, acreage, production, yield and average price, 1957-63

Year	Acreage	Yield[1]	Production[2]	Price per pound
	Acres	Pounds per acre	Million pounds	Equiv. U.S. cents
1957.....	9,439	320	3.0	28.8
1958.....	11,200	225	2.5	29.1
1959.....	13,733	495	5.4	27.1
1960.....	13,973	500	7.0	22.3
1961.....	19,079	280	5.3	17.1
1962.....	20,125	214	4.3	25.3
1963[3].....	18,000	289	5.2	26.4

[1] Calculated.
[2] Sales.
[3] Preliminary.

While competition from these other crops may continue to affect levels of Nyasaland tobacco production, other facts will include world demand and other conditions in the world tobacco market.

Fire-Cured

World demand for fire-cured continues to decline, while that for burley and flue-cured rises. This factor too will tend to increase the attractiveness of the latter two types locally.

Sun-Cured

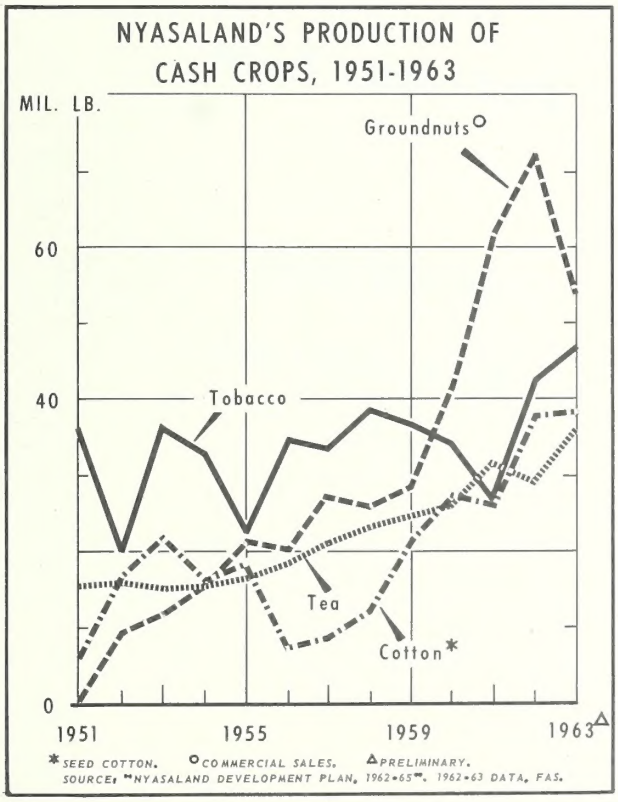
On the other hand, prospects for sun-cured tobacco production in Nyasaland are not clear. In 1963, production was up sharply from 1962, but near the levels of 1959 and 1960. Buyers, however, paid more per pound for the 1963 crop than for that of 1962.

Burley

Prospects seem favorable for significant increases in burley tobacco production, but quality is likely to remain a serious problem. Authorities are now trying to get producers to raise light-type burley, whereas practically all production in past has been heavy type (Red burley) leaf, not well-adapted for use in cigarettes. Problems of producing good-quality Nyasaland burley and marketing it are expected to continue to be more difficult than increasing quantities produced.

It will continue to be particularly difficult to produce a uniform, light burley with the aroma and open-grained texture that manufacturers desire for use in blended cigarettes.

Government officials, the Farmers' Marketing Board, and tobacco extension personnel, view Nyasaland burley production as an enterprise suitable to their overall plans for expanding production on small farms operated by Africans.



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